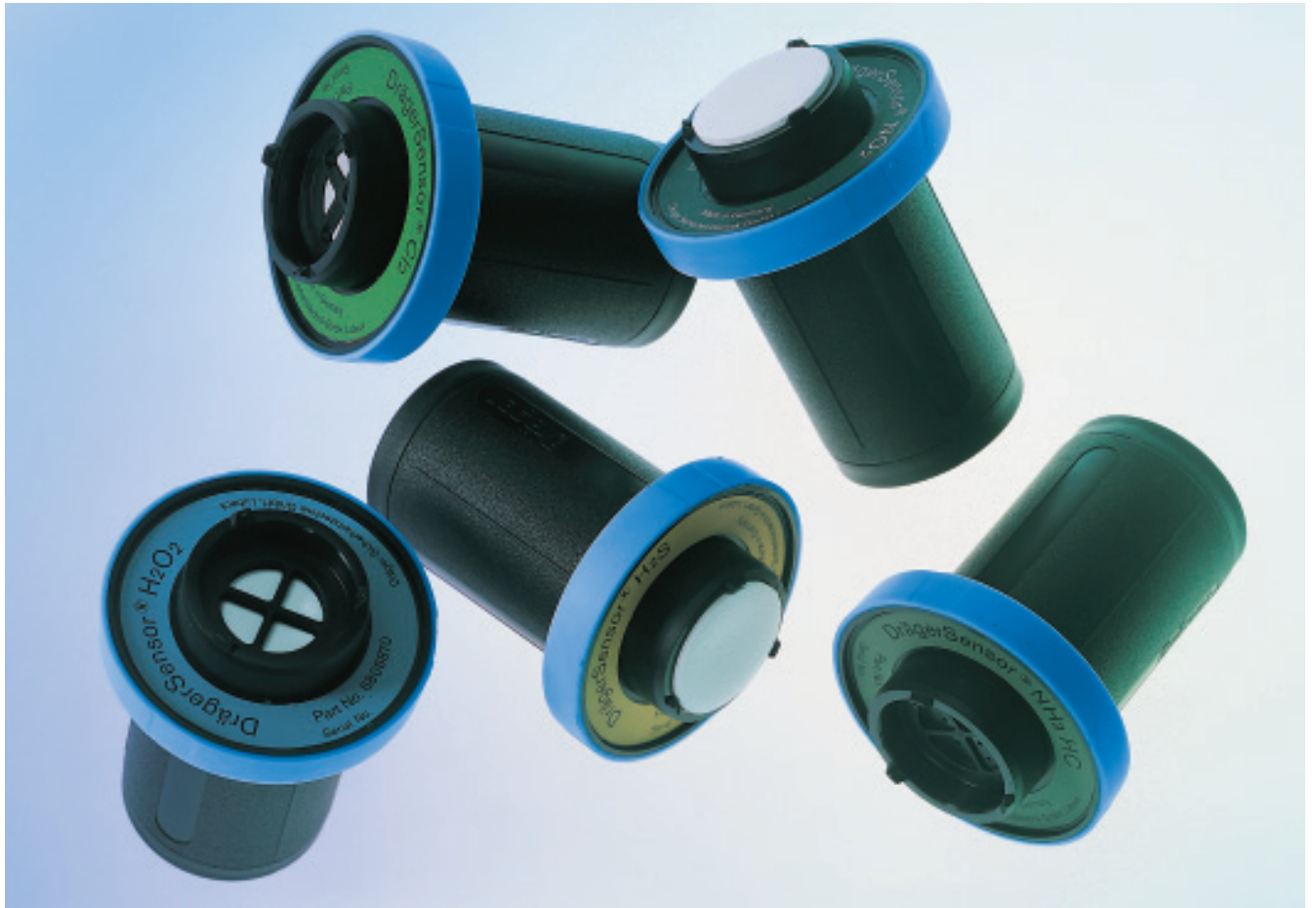


DrägerSensor®

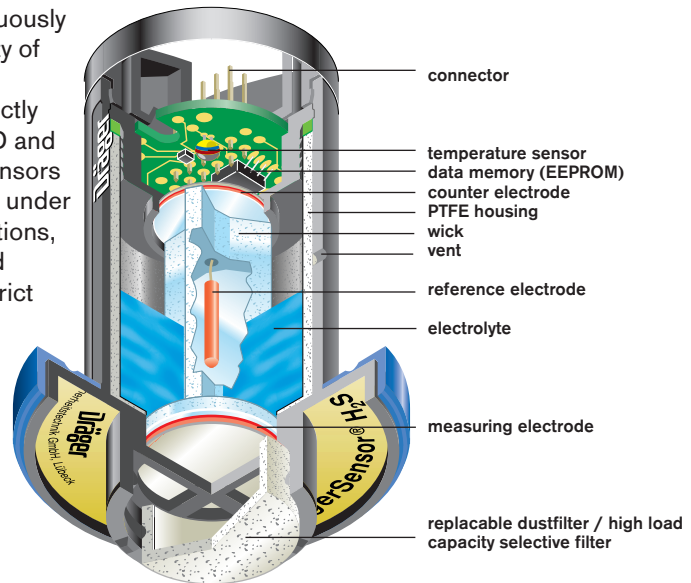


A quantum-leap in
sensor technology

The key element of any gas detection system is the sensor. The sensor determines not only the reliability of measurement, but also the cost of ownership of an entire system.

Dräger has more than 60 years experience in the development of gas sensors. Our current range of electrochemical, catalytic combustion and infrared gas sensors detect more than 300 different toxic and combustible gases. With an annual production output of more than 200,000 sensors, we pride ourselves being one of the world's leading gas sensor manufacturers.

In order to continuously improve the quality of our sensors, field experience is directly fed back into R&D and production. All sensors are manufactured under clean-room conditions, in computer aided processes with strict quality assurance procedures.



Selected gases detectable with DrägerSensors:

Gas	Formula	Gas	Formula	Gas	Formula
Acetaldehyde	CH ₃ CHO	Ethylene	C ₂ H ₄	Phosphorus trichloride	PCl ₃
Acetylene	C ₂ H ₂	Ethylene oxide	C ₂ H ₄ O	Phosphine	PH ₃
Acrylic acid	C ₃ H ₃ COOH	Ethylmercaptan	C ₂ H ₅ SH	Phosphoryl chloride	POCl ₃
Ammonia	NH ₃	Fluorine	F ₂	Propylene	C ₃ H ₆
Antimony-V-chloride	SbCl ₅	Formaldehyde	HCHO	Propylene oxide	C ₃ H ₆ O
Arsine	AsH ₃	Germanium hydride	GeH ₄	n-Propylmercaptan	C ₃ H ₇ SH
Boron trichloride	BCl ₃	Germanium tetrafluoride	GeF ₄	Selenium hydride	H ₂ Se
Boron trifluoride	BF ₃	Hydrogen	H ₂	Silane	SiH ₄
Bromine	Br ₂	Hydrogen bromide	HBr	Silicon tetrachloride	SiCl ₄
Butadiene-1.3	(C ₂ H ₃) ₂	Hydrogen chloride	HCl	Silicon tetrafluoride	SiF ₄
Butyl acrylate	C ₂ H ₃ COOC ₄ H ₉	Hydrogen cyanide	HCN	Sulphur dioxide	SO ₂
Butylamine, sec.	C ₄ H ₉ NH ₂	Hydrogen fluoride	HF	Stannic tetrachloride	SnCl ₄
Butylmercaptan, tert.	C ₄ H ₉ SH	Hydrogen peroxide	H ₂ O ₂	TEOS	(C ₂ H ₅ O) ₄ Si
Carbon monoxide	CO	Hydrogen sulphide	H ₂ S	Tetrahydrothiophene	C ₄ H ₈ S
Chlorine	Cl ₂	i-Propanol	(CH ₃) ₂ CHOH	Thionylchloride	SOCl ₂
Chlorine dioxide	ClO ₂	Isopropylamine	(CH ₃) ₂ CHNH ₂	Titanium tetrachloride	TiCl ₄
Diborane	B ₂ H ₆	Isopropylmercaptan	(CH ₃) ₂ CHSH	Trichlorosilane	SiHCl ₃
Dichlorsilane	SiH ₂ Cl ₂	Methanol	CH ₃ OH	Triethylamine	(C ₂ H ₅) ₃ N
Diethylamine	(C ₂ H ₅) ₂ NH	Methylmercaptan	CH ₃ SH	Trimethylamine	(CH ₃) ₃ N
Diethylethanolamine	(C ₂ H ₅) ₂ NC ₂ H ₄ OH	Methyl methacrylate	C ₂ H ₂ (CH ₃)COOCH ₃	Trimethylborane	B(CH ₃) ₃
Dimethylamine	(CH ₃) ₂ NH	Monomethylamine	CH ₃ NH ₂	Tungsten hexafluoride	WF ₆
Dimethylethylamine	(CH ₃) ₂ C ₂ H ₅ N	Morpholine	C ₄ H ₈ ONH	Vinyl acetate	CH ₃ COOC ₂ H ₃
Dimethyl sulfide	(CH ₃) ₂ S	Nitrogen dioxide	NO ₂	Vinyl chloride	C ₂ H ₃ Cl
Epichlorohydrin	C ₂ H ₃ OCH ₂ Cl	Nitrogen monoxide	NO		
Ethanol	C ₂ H ₅ OH	Nitrogen trifluoride	NF ₃		
Ethylacrylate	C ₂ H ₃ COOC ₂ H ₅	Oxygen	O ₂		

For gases not listed above, please contact us or our nearest agent.

DrägerSensor® is a registered trademark of the Drägerwerk AG in Germany.

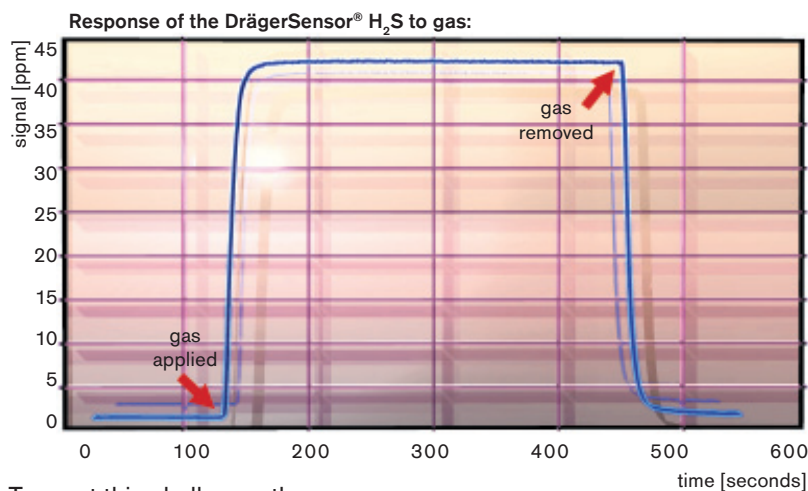
The new electrochemical DrägerSensor® is specially designed for the demanding use in a gas detection system, which must be in operation 24 hours a day, 365 days a year - even in the toughest environment.

The electrochemical DrägerSensor® also features a data memory (EEPROM) and an embedded temperature sensor.

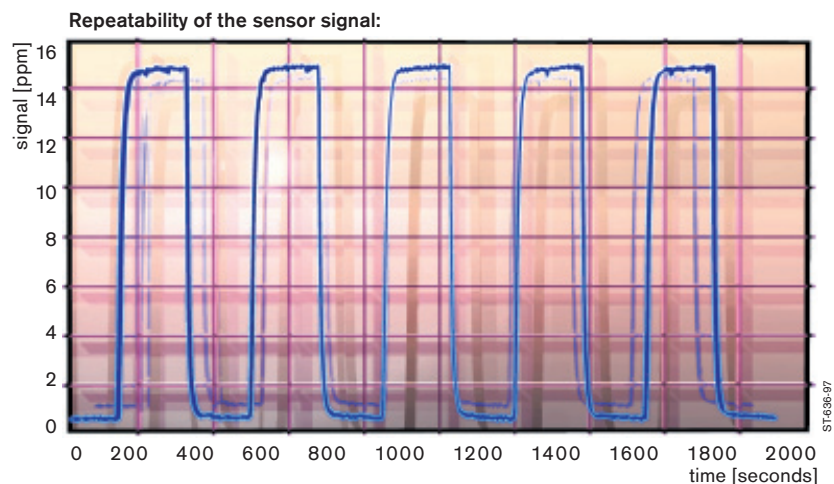
The data memory stores all sensor-specific data like gas(es), sensitivity, date of manufacture and date of last calibration. Since this data is stored in the sensor and not in the transmitter, a calibration can be carried out anywhere at any time. Sensors may be calibrated in a workshop instead of performing the calibration process in the field. A smart Polytron transmitter recognises a new sensor and automatically adjusts itself to it. No potentiometers need to be adjusted.

The temperature sensor, which is located directly inside the electrochemical sensor cell, efficiently compensates for temperature effects, based on the actual gas temperature.

Last but not least, in combination with Polytron's patented self-test routines a reliable operation of sensor and transmitter is verified at any time.



To meet this challenge, the DrägerSensor® is larger than a sensor used for portable instruments. This allows us to fill the sensor with more electrolyte for a long sensor life-time and use larger electrodes for higher sensitivity. Due to the consistent use of high-tech materials, the new sensor generation can be operated in a temperature range from -40°C (-40°F) to +65°C (+150°F). The permissible humidity ranges reach from 5% r.H. to 95% r.H. continuous exposure. The unique combinations of electrode material and electrolyte used for the new DrägerSensors, makes them extremely fast in response, highly specific to target gas and guarantees an excellent repeatability of the sensor signal.



Dräger Safety AG & Co. KGaA
Revalstrasse 1
D - 23560 Luebeck
Germany
Tel. + 49 451 8 82 - 27 94
Fax + 49 451 8 82 - 49 91

Draeger Safety UK Ltd.
Ullswater Close
Kitty Brewster Industrial Estate
Blyth, Northumberland, NE24 4RG
United Kingdom
Tel. + 44 1670 352891
Fax + 44 1670 356266

Draeger Industrie S.A.
3c, Route de la Fédération
F - 67025 Strasbourg Cedex
France
Tel. + 33 388 407676
Fax + 33 388 407667

Draeger Safety, Inc.
505 Julie Rivers
Suite 150
Sugar Land, TX 77478-2847
USA
Tel. + 1 281 498 1082
Fax + 1 281 498 5190

Draeger Safety Asia Pte Ltd.
67, Ayer Rajah Crescent #06-03
SGP-139950 Singapore
Singapore
Tel. + 65 872 9288
Fax + 65 773 2033

Beijing Fortune Draeger Safety
Equipment Co., Ltd.
22 Yu An Rd., B Area
Beijing
Tianzhu Airport Industrial Zone
Shunyi County
Beijing, 101300
P.R. China
Tel. + 86 10 80498000
Fax + 86 10 80498005

Visit us at:
www.draeger-safety.com/gds

Quality and Environmental Management
Our mission includes the continuous
improvement of our Quality and
Environmental Management Systems
in accordance with ISO 9001 and
ISO 14001.

DrägerService

Dräger equipment must always
be fully operational and safe.
DrägerService offers a regular
inspection service and is quickly
available in the event of mal-
function. Your equipment will be
repaired and back in operation as
quickly as possible. Dräger-
Service facilitates the vital flow
of information between client
and manufacturer.

Dräger Expertise

Since 1889, Dräger has had an outstanding reputation
for solving problems in the field of human breathing.
Dräger has been deeply involved in the handling of
gases, in particular hazard protection and the saving
of life in medical and industrial emergencies.
Many of the company's 9500 employees are active in
research and innovation to ensure that the latest
techniques and scientific advances are fully tested
before their inclusion in new equipment.



Dräger Worldwide

The Dräger sales and service
organisation is spread through-
out the world. It comprises more
than 25 subsidiaries and associ-
ated companies to ensure that
Dräger is always within easy
reach of its clients and in close
contact with all important
markets. Dräger's ever increasing
market share demonstrates the
company's international
competitiveness and strength.

Dräger has subsidiaries in the following countries:
Australia, Austria, Belgium, Bulgaria, Canada,
China, Croatia, Czech Republic, Denmark, France,
Great Britain, Hungary, Indonesia, Italy, Japan,
the Netherlands, Norway, Romania, Singapore,
Slovenia, Slovakia, South Africa, Spain, Sweden,
Switzerland, Thailand, Yugoslavia, USA.

Additionally, Dräger is widely represented in Central
and South America, Africa, the Middle East, the
Far East and Eastern Europe.

Represented by:

ETA Associates
119 Foster Street, Bldg #6
Peabody, MA 01960
Tel: (978) 532-1330
Fax: (978) 532-7325
www.ETAassociates.com
eta@ETAassociates.com